

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) A computer-implemented method of determining whether a plurality of datapaths executing a computer program should execute conditional processing in the computer program, comprising:

determining whether ~~PE~~ processor enable states of all of the datapaths are disabled;

determining whether the computer program is deterministic; and

branching around the conditional processing if the ~~PE~~ processor enable states of all of the datapaths are disabled and the computer program is non-deterministic.

2. (Currently Amended) The method of claim 1 wherein determining whether the ~~PE~~ processor enable states of all of the plurality of datapaths are disabled comprises:

evaluating a processor enable bit associated with each one of the plurality of datapaths.

3. (Original) The method of claim 2 wherein the processor enable bit is enabled if it is a value of one.

4. (Original) The method of claim 2 wherein the processor enable bit is disabled if it is a value of zero.

5. (Currently Amended) The method of claim 1 wherein ~~the~~ determining of whether the computer program is deterministic comprises evaluating a deterministic bit.

6. (Original) The method of claim 5 wherein the deterministic bit contains a first value indicating the computer program is deterministic.

7. (Original) The method of claim 5 wherein the deterministic bit contains a second value indicating the computer program is non-deterministic.

8. (Currently Amended) A method of determining whether datapaths in a program should execute a conditional processing block in the program, the method comprising:

- storing states of the datapaths;
- determining whether all the datapaths are disabled based on stored states of the datapaths;
- determining whether the program is non-deterministic;
- branching around the conditional processing block if all the datapaths are disabled and if  
the program is non-deterministic;
- executing the conditional processing block if all the datapaths are not disabled; and
- setting the states of the datapaths to stored states of the datapaths following executing the conditional processing block.

9 to 11. (Cancelled)

12. (Currently Amended) An instruction set that is stored in a machine-readable medium and that is ~~executed~~ executable by datapaths during conditional processing, the instruction set comprising one or more instructions to:

store states of the datapaths;

determine whether all of the datapaths are disabled[[,]] based on stored states of the datapaths;

determine whether the program is non-deterministic;

branch around the conditional processing if all of the datapaths are disabled and if the program is non-deterministic;

execute the conditional processing block if all the datapaths are not disabled; and

set the states of the datapaths to stored states of the datapaths following executing the conditional processing block.

13 to 18. (Cancelled)

19. (Previously Presented) The method of claim 8, wherein storing and branching are executed via a single instruction.

20. (Previously Presented) The instruction set of claim 12, wherein storing and branching are executed via a single instruction.